

smooth. Columella broad and smooth, obliquely arcuate adjoining the aperture. Canal broad, rounded, shallow and open. Length 10 mm., width 6.5 mm.

Locality.—6.9 fathoms, Sow and Pigs Reef, Port Jackson, New South Wales.

Remarks.—The unique and extraordinary form of this shell at first sight suggested some abnormality, and it was not until a second specimen was procured from the Queensland coast that the authors were satisfied that the novelty is definitely constant. The type was collected from material dredged by the "Triton" from the west channel at Sow and Pigs Reef, and there is no certainty of the depth below the harbour bed at which it was procured. This locality is very close to the east channel, where previous dredgings by the "Triton" procured so many strange, exotic molluscan types, some of which appear to be definitely extinct.

The type has been presented to the Australian Museum.

Notes on Australian Shells

No. 1

By LEE WOOLACOTT.

Family CONIDAE.

Genus VIRROCONUS Iredale, 1930.

VIRROCONUS IMPERATOR, *sp. nov.*

(Figure 3)

After much checking of literature and the study of a great number of cone shells, I have decided that the specimen here described is sufficiently distinct from any other cone to merit a name of its own. It is a very striking shell in appearance and would appear to have but one other which resembles it in any way, this is *Conus roseus* Lamarck, a West Indian Shell. As *roseus* of Lamarck has disappeared in the synonymy of *Conus regius cardinalis* Hwass, 1792 (in Bruguiere (see Clench, 1942) and as the new species in no way resembles *Conus regius*, or any varieties of *regius*, it is obvious that though they may appear similar in literature, they are not so in fact.

The shell is of medium size, 40 mm. high by 25 mm. wide at the periphery. Spire 8 mm. high, consisting of 8 whorls and 2-whorled protoconch. The body-whorl is encircled by 22 to 30 small ridges which are about 1 mm. apart. In some instances these ridges are absent towards the top of the body whorl, but in all cases they become stronger and more regular basally. The spiral ridge-ribbing is a very important diagnostic feature of this species and so fuller details follow. Towards the top of the body-whorl these ridges are usually pale cream or a very pale salmon colour, and on rare occasions, a very light mauve. All these spiral ridges above the median light band are of pastel tints and carry delicate, small chestnut spotting. Occasionally this spotting is irregular in shape and size, but it increases in frequency towards the base and in many cases the spots run together into interrupted chestnut lines which become purple-black below the median light band. The ground colour of the shell is a very distinctive pinkish-brown, most evident in slightly worn specimens. The ground colour deepens through red-brown to purple-black at the base, and at no period is there any touch of yellow. The yellow-browns of *Virroconus lividus* and its near relations separate them into quite a different colour group. The median light coloured band is about 2/10 in. wide, of a bluish-mauve or very light salmon-pink. The spire is neat, of 8

whorls, each whorl bearing about 12 cream-white nodules of medium dimensions. Between these nodules are rich patches of colour varying from a dark chestnut to purple-black, forming an almost continuous line on the body whorl but broken up into "pits" on the earlier spire whorls. The three apical whorls and the protoconch are light salmon-pink. Sculpture on the spire whorls consists of three rather weak spiral ridges to each whorl faintly crossed by rather obsolete growth striae. The periostracum is thick, strong, somewhat coarse and of a dark brown colour. A small colony of these cones was found at Trinity Bay, Queensland in August 1949.

Holotype presented to the Australian Museum, Reg. No. 61858.

Paratypes from Trinity Bay, 10 in my possession; from Fitzroy Island, Queensland, 1 in Mrs. Kerslake's collection and 1 in mine.

Family NATICIDAE.

Genus NATICARIUS Dumeril, 1806.

NATICARIUS LAVENDULA sp. nov.

(Figures 1 & 4)

This small naticoid is very richly and variously patterned and so is difficult to describe in full, but the rich lavender columella makes identification easy. When taken alive the very fine onion-skin periostracum is an additional help.

Size of shell 12 mm. high by 15 mm. wide. A little wider than high, of 4 whorls and a protoconch of $1\frac{1}{2}$ whorls. The body whorl is extremely large, the other 3 whorls being about $1/6$ th of total height. The protoconch is a clear golden-brown. The ground colour is white or bluish-white, patterned all over with longitudinal streaks of dark reddish-chestnut; these streaks may run together in blotches but usually they form a network leaving small white "tents" or rectangles. At the top of each whorl, just below the suture, the patterning shows a tendency to banding. This band is broad, white and marked with chestnut arrow-heads. Centrally on the body whorl a band of white heart-shaped or tent-like patches is quite conspicuous; but the general overall appearance is of a small brown shell with a few white flashes. The umbilical cavity is of medium length, narrow, brownish-purple in colour and forms a small pit behind the columella callous. The columella callous is of a rich lavender colour, sometimes with a slight brown tinge. All round the umbilical area and within the aperture there is a tinge of lavender. A pale band encircles the umbilical cavity. The operculum is sulcate, bearing about 12-16 grooves and showing 2 or more growth-lines. The growth-lines are of a most delicate pale blue in colour. The nuclear area of the operculum is raised in a prominent half-moon boss. *Natica violacea* Sowerby has a mauve columella and callous, but there the resemblance ends, the shape and style of umbilical cavity, callous and columella being utterly different. In *violacea* the spire-whorls are remarkably obscure and the sutures have a very ragged edge. *N. violacea* is quite a solid, white shell with five rows of golden-brown lunar spotting, and it is mentioned for comparison purposes as it is the only small naticoid so far recorded which has a purple columella and callous.

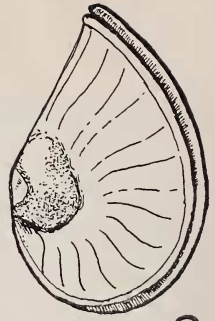
The new *Naticarius* is from Brampton Island, Queensland, and was found in July 1949.

Holotype presented to the Australian Museum, Reg. No. 61859.

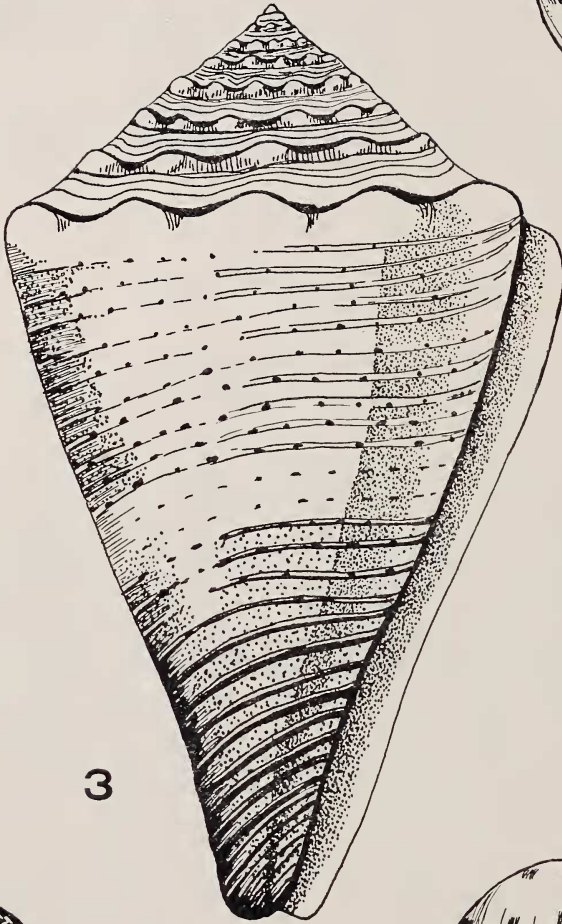
Paratypes: 5 from Brampton Island and 3 from Bowen, Queensland, in my possession.



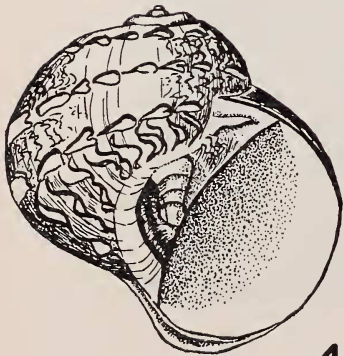
1



2



3



4



5

Delin Lee Woolcott.

See page 75 for Explanation of Plate.

NOTOCOCHLIS LUCULENTUS (Iredale).

(Figures 2 & 5)

An illustration of *Natica luculenta* Iredale appeared in the Records of the Australian Museum XVII, Sept. 4, 1929, p. 179, pl. xl, fig. 10. It is not always possible to obtain these Records today, and as the operculum was unknown at that time, a short description with an illustration of the shell and the operculum, Figs. 2 and 5, is given here to assist collectors.

So far as I know the shell is rare and from deep water; the holotype from 50-60 fathoms off Montague Island, N.S.W., and my specimen, alive, was trawled in 40 fathoms off Botany Bay and measured 18 mm. x 16 mm., smaller than the original. The shell is thin, very globose, of 6 whorls. The ground colour is cream and there are numerous rows of small chestnut splashes. The umbilical cavity is half-moon shaped with a small central boss arising from the very thin and narrow columella. A thin callous glaze extends to the outer lip. The operculum is thin and cream in colour, showing regular, very fine growth striae. At the nuclear area it is slightly roughened and sunken. The outer edge which fits against the outer lip is bent upwards at the first deep groove and is further slightly inclined at the second groove. This upward flange makes a very tight fit within the aperture. The opercular characters show that this small Naticoid should be placed under the genus *Notocochlis*.

I wish to thank Mrs. V. Rooke for a long series of Cones from Fitzroy Island Queensland, also Mr. T. Iredale for his assistance and advice.

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EXPLANATION OF PLATE.

1. *Naticarius lavendula*. Operculum x 2.
2. *Notocochlis luculentus*. Operculum x 2.
3. *Virroconus imperator*. Type x 2.
4. *Naticarius lavendula* x 2.
5. *Notocochlis luculentus* x 2.